



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/881,264

06/14/2001

Kie-Hsiung Yang

3158/OJ461

6651

7590

01/05/2005

Daniel R. McClure
Thomas, Kayden, Horstemeyer & Risley, L.L.P.
100 Galleria Parkway
Suite 1750
Atlanta, GA 30339

EXAMINER

LOUIE, WAI SING

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,264

Applicant(s)

YANG, KIE-HSIUNG

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-13,15-25 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-13,15-25 and 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant has amended the independence claim with the limitations from the objected claims and the claims 1-33 are in the allowable form. However, in view of the newly cited US Patent No. 6,630,979, a new ground of rejection is as below.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-13, 15-25, and 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,630,979 in view of Lee et al. (US 6,449,027).

With regard to claim 1, US 6,630,979 discloses an electrode array structure in a pixel area of an in-plane switching mode LCD (IPS-LCD), comprising:

- a comb-shaped common electrode having a bar extending transversely and a plurality of rectangular teeth extending in a first lengthwise direction from the bar (claim 1);
- a comb-shaped pixel electrode having a bar extending transversely and a plurality of teeth extending in a second lengthwise direction from the bar, where each tooth has a continuous angle-shaped sidewall and parallel is disposed between adjacent teeth of the common electrode (claim 1), where each tooth of the pixel electrode is formed by lengthwise linking of a plurality of trapezoids (claim 3).

With regard to claims 3, 6, 15, 18, 27, and 30, US 6,630,979 does not disclose the short-based length D_1 and the long-based length D_2 of the trapezoid satisfy the formula $D_2 \leq (D_1 \pm 50 \mu\text{m})$, excluding the case that $D_2 = D_1$. However, the short-based length D_1 and the long-based length D_2 of every trapezoid are $D_2 < (D_1 + x \mu\text{m})$. The width of the trapezoid is considered to involve routine optimization, which has been held to be within the level of ordinary skill in the art. As noted in *In re Aller*, the selection of reaction parameters such as the width etc. would have been obvious:

“Normally, it is to be expected that a change in temperature, or in thickness, or in time, would be an unpatentable modification. Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely degree from the results of the prior art...such ranges are termed “critical ranges and the applicant has the burden of proving such criticality.... More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”

In re Aller 105 USPQ233, 255 (CCPA 1955). See also *In re Waite* 77 USPQ 586 (CCPA 1948); *In re Scherl* 70 USPQ 204 (CCPA 1946); *In re Irmischer* 66 USPQ 314 (CCPA 1945); *In re Norman* 66 USPQ

308 (CCPA 1945); In re Swenson 56 USPQ 372 (CCPA 1942); In re Sola 25 USPQ 433 (CCPA 1935); In re Dreyfus 24 USPQ 52 (CCPA 1934).

Therefore, one of ordinary skill in the requisite art at the time the invention was made would have used any width suitable to the method of the process in order to optimize the design.

With regard to claims 4, 7, 16, 19, 28, and 31, US 6,630,979 discloses two adjacent trapezoids are connected by a rectangular strip (claim 4).

With regard to claims 5, 17, and 29, US 6,630,979 discloses each tooth of the pixel electrode is formed by lengthwise linking of a plurality of inverted trapezoids (claim 5).

With regard to claims 8, 10, 12, 20, 22, 24, and 32-33, US 6,630,979 does not disclose each tooth of the pixel electrode is indium tin oxide (ITO). However, Lee et al. disclose the pixel electrode is formed by ITO (Lee col. 5, lines 6-21). Lee et al. teach the transparent metal film such as ITO would increase brightness of the display and save power consumption (Lee col. 2, lines 14-42). US 6,630,979 and Lee et al. have substantially the same environment of an in-plane switching mode LCD device having the pixel electrode. Therefore, it would have been obvious for the one with ordinary skill in the art to modify the device of US 6,630,979 with the teaching of Lee et al. to form the pixel electrode with ITO in order to increase brightness of the display and save power consumption.

With regard to claims 9 and 21, in addition to the limitations disclosed in claim 1, US 6,630,979 modified by Lee et al. would disclose:

- a protection layer 27 sandwiched between the common (first) electrode 21 and pixel (second) electrode 28 (fig. 4).

With regard to claims 11, 13, 23, and 25, in addition to the limitations disclosed in claim 1, US 6,630,979 discloses the first electrode having a rectangular profile and the second electrode having a continuous angle-shaped sidewall, but does not disclose the first electrode having a continuous angle-shaped sidewall while the second electrode having a rectangular profile. However, Reversal of parts was held to have been obvious for a person having ordinary skill in the art. In re Gazda 104 USPQ 400 (CCPA 1955).

Response to Arguments

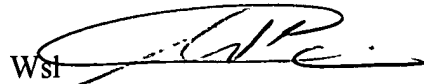
Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2814

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Wsl
January 1, 2005.